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| PPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO |
|----------------|----------------------------------|----------------------|-------------------------|-----------------|
| 09/813,267 | 03/20/2001 | Tyler Lowrey | 2024.24 | 2620 |
| 24963 | 7590 04/18/2005 | | EXAMINER | |
| | CONVERSION DEVICE | CAO, PHAT X | | |
| | RVIEW DRIVE R HILLS, MI 48309 | | ART UNIT | PAPER NUMBER |
| · | | | 2814 | |
| | | | DATE MAILED: 04/18/2005 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | | |
|---|---|---|--|--|--|--|
| | 09/813,267 | LOWREY ET AL. | | | | |
| Office Action Summary | Examiner | Art Unit | | | | |
| | Phat X. Cao | 2814 | | | | |
| The MAILING DATE of this commun. | | | | | | |
| Period for Reply | | | | | | |
| A SHORTENED STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNI - Extensions of time may be available under the provisions after SIX (6) MONTHS from the mailing date of this comm - If the period for reply specified above is less than thirty (3) - If NO period for reply is specified above, the maximum state - Failure to reply within the set or extended period for reply Any reply received by the Office later than three months a earned patent term adjustment. See 37 CFR 1.704(b). | CATION. of 37 CFR 1.136(a). In no event, however, may a nunication. O) days, a reply within the statutory minimum of the atutory period will apply and will expire SIX (6) MC will, by statute, cause the application to become A | ireply be timely filed irty (30) days will be considered timely. INTHS from the mailing date of this communication. ABANDONED (35 U.S.C. § 133). | | | | |
| Status | | | | | | |
| 1) Responsive to communication(s) file | d on <i>01 February 2005</i> . | | | | | |
| | · · · · · · · · · · · · · · · · · · · | | | | | |
| • • • | Since this application is in condition for allowance except for formal matters, prosecution as to the ments is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. | | | | | |
| Disposition of Claims | | | | | | |
| 4) ☐ Claim(s) 66-83 is/are pending in the application. 4a) Of the above claim(s) 69-83 is/are withdrawn from consideration. 5) ☐ Claim(s) 66-68 is/are allowed. 6) ☐ Claim(s) is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or election requirement. | | | | | | |
| Application Papers | | | | | | |
| 9)☐ The specification is objected to by the Examiner. | | | | | | |
| 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. | | | | | | |
| Applicant may not request that any obje | - | | | | | |
| Replacement drawing sheet(s) including 11) The oath or declaration is objected to | | g(s) is objected to. See 37 CFR 1.121(d). ed Office Action or form PTO-152. | | | | |
| Priority under 35 U.S.C. § 119 | | | | | | |
| 2. Certified copies of the priority3. Copies of the certified copies | documents have been received. documents have been received in of the priority documents have bee anal Bureau (PCT Rule 17.2(a)). | Application No n received in this National Stage | | | | |
| Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (F3) Information Disclosure Statement(s) (PTO-1449 or Report Note) Mail Date | PTO-948) Paper No. 5) Notice o | / Summary (PTO-413) o(s)/Mail Date f Informal Patent Application (PTO-152) | | | | |
| Paper No(s)/Mail Date | 6) | | | | | |

Office Action Summary

Application/Control Number: 09/813,267

Art Unit: 2814

DETAILED ACTION

Page 2

1. The cancellation of claims 1-65 in Paper filed on 2/1/05 is acknowledged.

2. Newly submitted claims 69-79 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the product as claimed in newly submitted claims 50-60 discloses an electrically contact having a second dielectric layer disposed on the conductive layer within the opening, the conductive layer including a first portion and a second portion on the sidewall surface, the second portion raised above the upper surface of the first portion (see Fig. 5D). On the other hand, the original elected claims disclose the electrically contact having no second portion of the conductive layer raised above the upper surface of the first portion of the conductive layer formed on the sidewall surface of the opening (see Fig. 5B);

Similarly, the product as claimed in newly submitted claims 80-83 discloses an electrically contact having a cup-shaped and coupled to a substrate, the cup-shaped contact having an open end, having a dielectric material formed over the interior surface of the cup-shaped contact, and having protrusion(s) extending upward from the rim of the cup-shaped contact. On the other hand, the original elected claims disclose the product comprising an electrically contact having no protrusion(s) extending upward from the rim of the cup-shaped contact.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 69-83 are withdrawn from consideration

Application/Control Number: 09/813,267 Page 3

Art Unit: 2814

as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Allowable Subject Matter

3. Claims 66-68 are allowed.

The prior art of record fails to disclose the combination of an electrically programmable element structures recited in the base claim, including the combination of the structures comprising the conductive layer and the raised portion having a lateral thickness, and the raised portion having a lateral width as claimed.

Response to Arguments

4. Applicant argues that the newly submitted claims 69-83 are supported by original claim 8.

The examiner disagrees because the original dependent claim 8 claims the conductive layer being a conductive liner as shown in Fig. 5B embodiment, but does not claim a second portion of the conductive layer raised above the upper surface of a first portion of the conductive layer formed on the sidewall surface of the opening as claimed in newly independent claim 69 and in Fig. 5D embodiment, or does not claim an cupshaped electrical contact having protrusions extending upward from the rim of the cupshaped contact as claimed in newly independent claim 80 and in Fig. 5D embodiment.

Conclusion

5. This application is in condition for allowance except for the following formal matters:

Art Unit: 2814

This application is in condition for allowance except for the presence of newly submitted claims 69-83 drawn to an invention, which is distinct from the invention original claimed. Applicant is request to cancel the noted claims.

Prosecution on the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO**MONTHS from the mailing date of this letter.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phat X. Cao whose telephone number is (571) 272-1703. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/813,267

Art Unit: 2814

April 15, 2005

Page 5

PHAT X. CAO

PRIMARY EXAMINER